

**REMARKS**

Claims 1, 6-11, 13 and 15-25 are pending. Applicants appreciate the Examiner's consideration and time in discussing the application during the pre-appeal brief process.

Claims 1, 6-10, 13 and 15-17, 19-20, 22-25 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kobayashi et al. U.S. Patent No. 6,235,180 B1 ("the Kobayashi patent"). Claims 11, 18 and 21 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over the Kobayashi patent in view of Yamamoto et al. U.S. Patent No. 4,517,030 and Bittner et al. U.S. Patent No. 5,152,849. Applicants respectfully traverse the rejections because the cited references neither disclose nor suggest any claimed compositions.

The Kobayashi patent discloses a phosphate film forming bath that contains *very* broad ranges of zinc ion, phosphoric acid ion and nitric acid ion. The Office action states "the selection of claimed zinc, phosphoric acid, nitric acid concentration ranges and zinc:phosphoric acid ratio range from the disclosed range of Kobayashi would have been obvious." Assuming *arguendo* that the Examiner has made a *prima facie* showing of obviousness, Applicants' specification rebuts that showing. For example, Applicants' comparative example #1, *which creates a white precipitate (sludge)*, **falls directly within the Kobayashi patents broad ranges and satisfies its molar ratio**. Thus, it is clear that not all combinations of the components of the Kobayashi compositions result in non-sludging compositions.

Moreover, Applicants are of the opinion that no *prima facie* case has been established, as the Examiner has provided no motivation or suggestion to make **the claimed invention**. Recall that the Applicants' discovered that by controlling the relationship between the zinc

concentration and the concentrations of phosphoric acid, nitric acid, cations, and anions in a zinc phosphate treatment liquid composition, they can obtain compositions having the benefit of being nonsludging. Merely assembling broad ranges of the components is insufficient. *See* Comparative Example 1. Because of the number of variables and their changeability (depending upon their respective concentrations), the relationship is quite complex and is best demonstrated by the claimed mathematical condition(s). Thus, it is incumbent on the Examiner to set out where the Kobayashi reference provides motivation to form **the claimed invention**.

The Kobayashi reference nowhere discloses the complex relationship of the compositions necessary to eliminate both zinc phosphate and iron phosphate sludge. Rather, the Kobayashi reference apparently equates iron phosphate to “sludge,” and fails to teach how to remove zinc phosphate sludge. Applicants recognized the shortcoming in the Kobayashi reference, namely, that cathodic electrolysis alone will not remove all sludge, as explained in Applicants' specification:

The execution of phosphate treatment using cathodic electrolysis is one countermeasure to the sludge problem . . . . The substrate dissolution reaction (1) is no longer necessary and the production of iron phosphate sludge can be avoided. ***However, since sludge actually also contains about 10 to 25% zinc phosphate in addition to iron phosphate, the use of just cathodic electrolysis cannot completely eliminate sludge production.***

Since the Kobayashi patent is limited to trying to eliminate the production of sludge via cathodic electrolysis, and Applicants clearly state that ***cathodic electrolysis cannot completely eliminate sludge production***, the reference cannot provide the required motivation or suggestion.

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**PATENT**

The Yamamoto and Bittner references fail to remedy the shortcomings of the Kobayashi reference, and thus the rejection of dependent claims 11, 18, and 21, is improper as well.

The dependent claims depend from and further limit independent claims that distinguish over the Kobayashi patent, and therefore distinguish over it as well.

Accordingly, the Office should withdraw its rejections.

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